

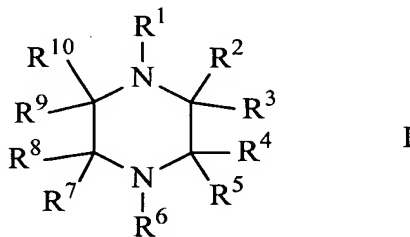
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16 (cancelled)

17 (previously presented): An element for the attachment of protein arrays, the element comprising a surface to which are attached
a plurality of piperazine functional groups;
a polymer;
a crosslinking compound A-L-B;
wherein A is a functional group capable of interacting with a piperazine functional group of the invention; L is a linking group capable of interacting with A and with B; and B is a specific functionality that provides one or more reactive units capable of interacting with a protein capture agent, and wherein the piperazine functional groups are represented by Formula I:



where

$R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}$, are hydrogen, alkyl, alkenyl, alkynyl, alkylhalo, cycloalkyl, cycloalkenyl, alkylthio, alkoxy, with the proviso that at least one of the groups R^1 to R^{10} be a linkage group (L').

18 (original): The element in claim 17 wherein at least one of the functional groups A or B in A-L-B is aldehyde, epoxy, hydrazide, vinylsulfone, succinimidyl ester, carbodiimide, maleimide, dithio, iodoacetyl, isocyanate, isothiocyanate, or aziridine.

19 (original): The element in claim 18 wherein at least one of the functional groups in A-L-B is vinylsulfone.

20 (cancelled)

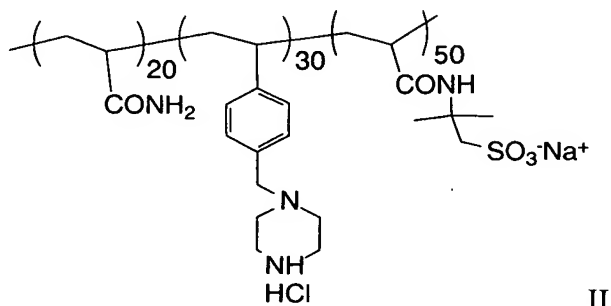
21 (previously presented): The element of claim 17 wherein the linkage group L' comprises any combination of non-labile covalently bonded chemical units sufficient to connect the piperazine functional group to the surface.

22 (original): The element of claim 21 wherein the surface contains a polymer.

23 (original): The element of claim 17 wherein the crosslinking compound A-L-B is bis(vinylsulfonyl)methane, bis(vinylsulfonyl)methyl ether, or bis(vinylsulfonylacetamido)ethane.

24 (original): The element in claim 17 where the crosslinking compound A-L-B is bis(vinylsulfonyl)methane and the piperazine containing polymer comprising 1-(4-vinylbenzyl)piperazine or methacrylic acid piperazine amide monomers, or the corresponding inorganic acid or organic acid addition salts thereof.

25 (original): The element of claim 17 wherein the crosslinking compound A-L-B is bis(vinylsulfonyl)methane and the piperazine polymer is defined by Formula II.



where 20, 30, and 50 represent the relative molar amounts of each monomeric unit.

26 (original): The element of claim 24 wherein the surface contains gelatin.

– 27 (original): The element of claim 25 wherein the surface contains gelatin.